

Preliminary Amendment

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Applicant(s): Eugene P. Marsh

Serial No. Unknown (Parent Serial No. 09/146,866)

Filed: Herewith (Parent: 3 September 1998)

For: DIFFUSION BARRIER LAYERS AND METHODS OF FORMING SAME

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complexes of the following formula (Formula I): (diene)Ru(CO)₃ wherein: "diene" refers to linear, branched, or cyclic dienes, bicyclic dienes, tricyclic dienes, fluorinated derivatives thereof, combinations thereof, and derivatives thereof additionally containing heteroatoms such as halide, Si, S, Se, P, As, or N. These precursor complexes and others are described in Assignees' copending patent application entitled "Precursor Chemistries for Chemical Vapor Deposition of Ruthenium and Ruthenium Oxide" having U.S. Serial No. 09/141,236, filed August 27, 1998 and in Assignees' copending patent application entitled "Methods for Preparing Ruthenium and Osmium Compounds" having U.S. Serial No. 09/141,431, filed August 27, 1998. Further, for example, additional precursors are generally discussed in U.S. Patent No. 5,372,849 to McCormick et al. More preferably, the ruthenium precursors used according to the present invention include one of C₆H₈Ru(CO)₃, bis(cyclopentadienyl) ruthenium (II), triruthenium dodecacarbonyl, and cyclopentadienyl dicarbonyl ruthenium (II) dimer.

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Please replace the paragraph beginning at page 11, line 6, with the following rewritten paragraph. Per 37 C.F.R. §1.21, this paragraph is also shown in Appendix A with notations to indicate the changes made.

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Methods of forming the co-deposited platinum:ruthenium alloy layer 14 are described in co-pending patent application entitled "Method for Producing Low Carbon/Oxygen Conductive Layers" having U.S. Serial No. 09/146,297, filed September 3, 1998. One skilled in the art will recognize that these methods and various other methods may be used to form the platinum:ruthenium alloy layer 14 according to the present invention.

In the Claims

Please cancel claims 1-22 as requested in the Request for Filing A Divisional Patent Application Under Rule §1.53(b), filed concurrently herewith.